

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044114 A1

(51) International Patent Classification⁷: **A61B 17/16**

(21) International Application Number:
PCT/IB2004/003684

(22) International Filing Date:
10 November 2004 (10.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/518,769 10 November 2003 (10.11.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report
— with amended claims

Date of publication of the amended claims: 27 October 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PRECISION SPINDLE INSTRUMENT HOLDER FOR SURGICAL INSTRUMENT



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(57) Abstract: A surgical instrument holder (10) is made up of a head assembly (68) and a drive spindle assembly (42). The head assembly (68) has a shank (12) with a first driveable end (14) and second coupling end (16). The second end has a coupling device (20) having an interface (22) for receiving a surgical instrument (24). The instrument (24) is held in functional assembly to the shank by a releasable locking mechanism (26). The releasable locking mechanism (26) is made up of a ring (30) slideably disposed about the shank, a spring (32) biased against the coupling device (20) by the ring, and a connection device (34) retaining the ring in a fixed position during use. The drive spindle assembly (42) is connected to the head assembly (68) so as to transmit torque therethrough. The spindle assembly (42) has an elongated drive spindle (40), highprecision bearings (44, 120, 122) and a cylindrical tube (46). The drive spindle (40) is releasably mounted to an end (36) of the spindle assembly and is supported for rotation within the cylindrical tube (46) by the high-precision bearings disposed therebetween and held in place at least in part by the shank (12). The bearings (44) precisely control the position of a surgical instrument (24) affixed thereto. The connection device (34) provides a common quick-release connection with the head assembly (68) and the drive spindle assembly (42), such that unlocking of the connection device (34) enables quick disassembly of the connection device, spring (32), ring (30), and drive spindle assembly (42) for cleaning and component sterilization.